

## Cumulative Review 2 (3H)

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**Multiply. Use identities if possible.**

1.  $(2x + y)^3$

2.  $(2x + 3i)(2x - 3i)$

**Factor. Use identities if possible.**

3.  $8x^3 - 1$

4.  $x^2 + 3x - 54$

5.  $12x^2 + 5x - 2$

6.  $3xz - 15x + yz - 5y$

**Describe the end behavior of the polynomial using limits.**

7.  $f(x) = -3x^5 - 15x^4 + x^3 + 2x^2 - x - 5$

Right end behavior: \_\_\_\_\_

Left end behavior: \_\_\_\_\_

**Use long division to simplify the expression.**

8.  $(-3x^5 - 15x^4 + x^3 + 2x^2 - x - 5) \div (x^2 - 2x + 1)$